

CLAIMS

1. A device in a wireless communication system, comprising:
a data processor operative to process at least one data block, received in a current update interval and on at least one transport channel among a plurality of transport channels, and to provide a status of each of the at least one data block; and
a controller operative to adjust a single signal quality (SIR) target maintained for the plurality of transport channels based on status of the at least one data block received in the current update interval, wherein the SIR target is adjusted by all data blocks received on all transport channels in the current update interval and is used for power control of data transmission on the plurality of transport channels.
2. The device of claim 1, wherein the controller is operative to increase the SIR target based on an up step if any one of the at least one data block is an erased data block and to decrease the SIR target based on a down step if all of the at least one data block are good data blocks.
3. The device of claim 2, wherein each of the plurality of transport channels is associated with a respective down step size, and wherein the up step is a fixed value and the down step is set to a smallest down step size among down step sizes for transport channels with erased data blocks in the current update interval.
4. The device of claim 2, wherein the up step is set to a first value if an erased block is received for a transport channel without an erased block in a prior update interval and set to a second value otherwise, the first value being larger than the second value.
5. An apparatus in a wireless communication system, comprising:
means for processing at least one data block, received in a current update interval and on at least one transport channel among a plurality of transport channels, and providing a status of each of the at least one data block; and
means for adjusting a signal quality (SIR) target maintained for the plurality of transport channels based on the status of the at least one data block received in the

current update interval, wherein the SIR target is adjusted by all data blocks received on all transport channels in the current update interval and is used for power control of data transmission on the plurality of transport channels.

6. A device in a wireless communication system, comprising:

a data processor operative to process at least one data block, received in a current update interval and on at least one transport channel among a plurality of transport channels, and to provide a status of each of the at least one data block; and

a controller operative to increase a signal quality (SIR) target if any one of the at least one data block received in the current update interval is an erased data block and to decrease the SIR target if all of the at least one data block received in the current update interval are good data blocks, wherein the SIR target is used for power control of data transmission on the plurality of transport channels.

7. The device of claim 6, wherein each of the at least one transport channel is associated with a respective block error rate (BLER) target, and wherein the controller is operative to increase or decrease the SIR target to meet or exceed the BLER target for each of the at least one transport channel.

8. The device of claim 6, wherein the controller is operative to increase the SIR target by an up step having an adjustable size and to decrease the SIR target by a down step having an adjustable size.

9. The device of claim 8, wherein the up step is set to a first value if an erased block is received for a transport channel without an erased block in a prior update interval and set to a second value otherwise, the first value being larger than the second value.

10. The device of claim 6, wherein the controller is operative to increase the SIR target by an up step having a fixed size and to decrease the SIR target by a down step having an adjustable size.

11. The device of claim 10, wherein each of the plurality of transport channels is associated with a respective down step size selectable as the down step used to decrease the SIR target.

12. The device of claim 11, wherein the controller is further operative to set the down step to a smallest down step size among down step sizes for transport channels with erased data blocks in the current update interval.

13. The device of claim 11, wherein the down step size for each of the plurality of transport channels is determined based on a block error rate (BLER) target and at least one transport format selected for the transport channel.

14. The device of claim 6, wherein the controller is further operative to saturate the SIR target to be within a predetermined range of values.

15. The device of claim 6, wherein each of the at least one data block received in the current update interval is associated with a respective block duration, and wherein the current update interval is shorter than a longest block duration among the at least one data block received in the current update interval.

16. The device of claim 15, wherein the controller is operative to increase the SIR target by an up step if any one of the at least one data block received in the current update interval is an erased data block and to decrease the SIR target based on a down step and an adjustment duration if all of the at least one data block received in the current update interval are good data blocks, wherein the down step indicates an amount of adjustment to the SIR target per frame, and wherein the adjustment duration indicates the number of frames for which to apply the adjustment to the SIR target.

17. The device of claim 16, wherein the adjustment duration indicates the number of frames covered by a longest block duration among the at least one data block and for which an adjustment to the SIR target has not been made previously.

18. The device of claim 6, further comprising:

a transmit power control (TPC) processor operative to compare a received SIR for the data transmission against the SIR target and provide TPC commands used to adjust transmit power for the data transmission.

19. The device of claim 6, wherein the wireless communication system is a Code Division Multiple Access (CDMA) system.

20. An apparatus in a wireless communication system, comprising:
means for processing at least one data block received in a current update interval and on at least one transport channel among a plurality of transport channels;
means for determining a status of each of the at least one data block received in the current update interval as a good data block or an erased data block;
means for increasing a signal quality (SIR) target if any one of the at least one data block received in the current update interval is an erased data block; and
means for decreasing the SIR target if all of the at least one data block received in the current update interval are good data blocks, wherein the SIR target is used for power control of data transmission on the plurality of transport channels.

21. A processor readable media for storing instructions operable in a wireless device to:
process at least one data block received in a current update interval and on at least one transport channel among a plurality of transport channels;
determine a status of each of the at least one data block received in the current update interval as a good data block or an erased data block;
increase a signal quality (SIR) target if any one of the at least one data block received in the current update interval is an erased data block; and
decrease the SIR target if all of the at least one data block received in the current update interval are good data blocks, wherein the SIR target is used for power control of data transmission on the plurality of transport channels.

22. A method of adjusting a signal quality (SIR) target used for power control of a data transmission in a wireless communication system, comprising:

processing at least one data block received in a current update interval and on at least one transport channel among a plurality of transport channels;

determining a status of each of the at least one data block received in the current update interval as a good data block or an erased data block;

increasing the SIR target if any one of the at least one data block received in the current update interval is an erased data block; and

decreasing the SIR target if all of the at least one data block received in the current update interval are good data blocks.

23. A device in a wireless communication system, comprising:

a data processor operative to process at least one data block received in a current update interval and on at least one transport channel among a plurality of transport channels and to provide a status of each of the at least one data block; and

a controller operative to increase a signal quality (SIR) target based on an up step if any one of the at least one data block received in the current update interval is an erased data block, decrease the SIR target based on a down step if all of the at least one data block received in the current update interval are good data blocks, and update the down step if any one of the at least one data block received in the current update interval is an erased data block, wherein the SIR target is used for power control of data transmission on the plurality of transport channels.

24. An apparatus in a wireless communication system, comprising:

means for processing at least one data block received in a current update interval and on at least one transport channel among a plurality of transport channels;

means for determining a status of each of the at least one data block received in the current update interval as a good data block or an erased data block;

means for increasing a signal quality (SIR) target based on an up step if any one of the at least one data block received in the current update interval is an erased data block;

means for decreasing the SIR target based on a down step if all of the at least one data block received in the current update interval are good data blocks; and

means for updating the down step if any one of the at least one data block received in the current update interval is an erased data block, wherein the SIR target is used for power control of data transmission on the plurality of transport channels.

25. A method of adjusting a signal quality (SIR) target used for power control of a data transmission in a wireless communication system, comprising:

receiving at least one data block in a current update interval on at least one transport channel among a plurality of transport channels;

determining a status of each of the at least one data block received in the current update interval as a good data block or an erased data block;

increasing the SIR target based on an up step if any one of the at least one data block received in the current update interval is an erased data block;

decreasing the SIR target based on a down step if all of the at least one data block received in the current update interval are good data blocks; and

updating the down step if any one of the at least one data block received in the current update interval is an erased data block.